STATINTL [redacted]

File

July 3, 1963

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Personal Memo to: [redacted] (one copy only produced)

Subject: Multiple Image Correlator (MIC)

Historical

The correlator was built as the result of a contract awarded in March 1960. The contract called for building a model to demonstrate the feasibility of multiple image correlation. The contract was finally completed in March 1962.

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The machine remained at [redacted] after acceptance checkout pending a decision to award an evaluation contract. [redacted] proposal to evaluate was made in September 1962 and the contract was awarded in February 1963. The original proposal was for May 1963 completion, but due to the delay in awarding the contract, extension of delivery was made to July 1963.

Total time from first starting to build the correlator until delivery in July 1963 is three years. This has included building time, a waiting period of approximately one year, and evaluation time.

The correlator does what it was originally proposed it should do -- it demonstrates the feasibility of the technique by means of a fairly complex machine. For production work of any type the machine lacks the following essential features:

1) Scale change accommodation between each of the 8 stages
2) Electronic alignment visual presentation equipment. The circuitry has to be linked to visual presentation equipment by means of a number of external leads. This circuitry is experimental and certainly not adequate for production work.
3) Good operator convenience, i.e., position of XYθ controls in the stages, film chips instead of roll film capability, etc.

These three factors alone make it difficult to operate outside a laboratory without experienced (experienced on this machine) operators.

The value and advantages of this machine can be adequately demonstrated to potential users by means of the material it produced, i.e. correlated photography. The evaluation program will detail many factors and will include demonstratable material.

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As a company, [redacted] is vitally interested in furthering the state of the art related to this technique. This encompasses both the actual correlation and the collection of material (air and ground). We want to adequately sell our ability to build functional production correlators. You have an intangible investment in [redacted] in the form of 3 years of engineering experience.

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We have an excellent technical argument to present to collection (air) people on Monday, July 8, in Washington, D.C., saying why we can expand the technique to operational aerial collection. We have talked with [redacted] and can show we can materially aid him in his ground collection work.

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Comments

1) We can now build a really functional production machine and this is what we would like to finally deliver to you.

2) If this technique still has to be sold we can do it better with this machine in our laboratory. We have the experienced people here who can operate the machine, produce the correlated material and present it. We already have a great deal of material to demonstrate the technique and its value to intelligence photography.

3) The machine can go to your laboratory and be operated, but remembering it is a feasibility model, would probably require a great deal of experimental use by you before its full potential can be demonstrated. Without adequate operation it could
STATINTL reflect back on [redacted] unless every time it is used the fact is stressed that this never was intended to be a production machine. Please understand I am not underrating your ability to operate the correlator but unskilled operation of the machine can occur in your absence.

Operation of the correlator will require good troubleshooting knowledge of the electronic circuits, which will only come with extensive use. If you take the machine on July 21, I am sure you would not be ready to invite people in and do work for them for several weeks.

There are these alternatives:

1) Keep the machine here, let us work it and produce presentation material pending further decisions in the collection ends of the business which will relate to building the production machine. This will further the state of the art, give you talking material and
STATINTL keep my team of correlation engineers together. This latter is important, I think, both to the community and to [redacted]

2) Award a change in scope to build the visual presentation equipment into the machine. This, I think, would be wasteful if a production version is to be built. A change of scope would add for a modest sum ([redacted] to your present investment of STAT
STAT approximately [redacted] With no scale change capability the machine will still be inadequate.

3) Take the machine back to D. C. and invest in a few weeks of our engineers' time to run it for you with your people in attendance. This may pose a security problem.

As I have said before, I still favor #1 as the results sell the technique. You may get sour results if the inputs cannot be cut to the 1" circle, or if there are scale differences, etc.

From my personal viewpoint, I believe in this technique; I know it can be of value to the community, but I am afraid that it could die for some time unless it is vigorously pursued. I can do this; you have many other problems to deal with which may intrude on your time. No one knows better than I that it would be very nice to have a piece of equipment in your laboratory which [redacted] delivered. However, three years have elapsed since the programs started. We've learned a great deal in that time, and we're still only on the threshold of exploiting the technique. With this in mind, and with a feasibility model in hand, we can build and deliver a really fine production machine. This will be a worthwhile piece of equipment, and being selfish, will really demonstrate [redacted] capability to build good equipment. I have yet to convince your organization that this is so and in a production correlator I know I can do it. I have talked with [redacted] today (he called me), and he tells me he has talked to [redacted] hopes to be in [redacted] with some of his material to correlate on July 17th.

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